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METHOD OF PRODUCING CINEMATOGRAPHIC TITLES, HEADLINES, ANNOUNCEMENTS, AND THE LIKE

Filed March 19, 1927

Fig. 1

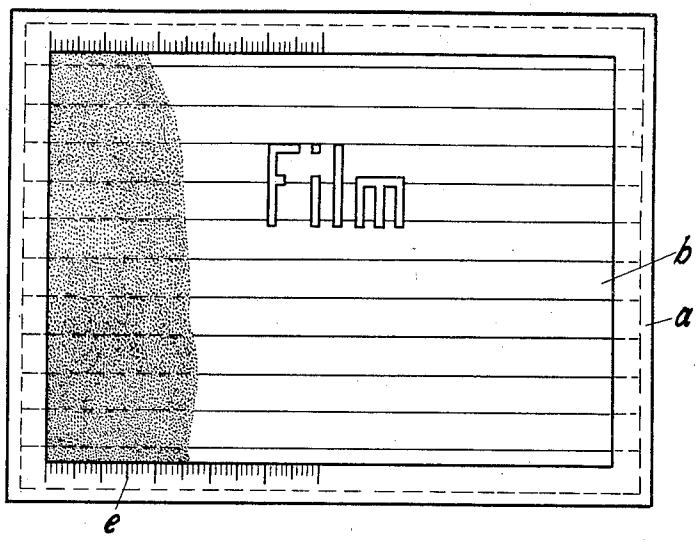


Fig. 2

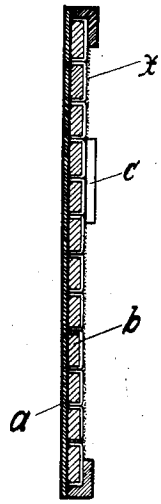


Fig. 3

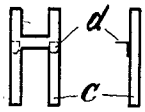


Fig. 4

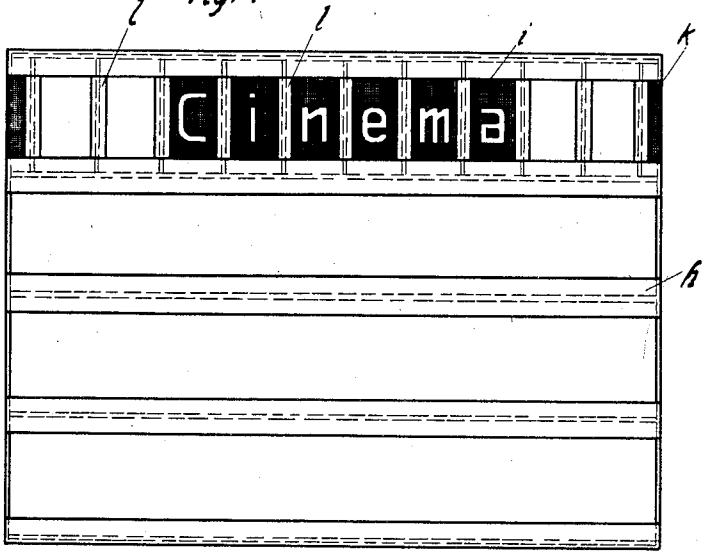


Fig. 5

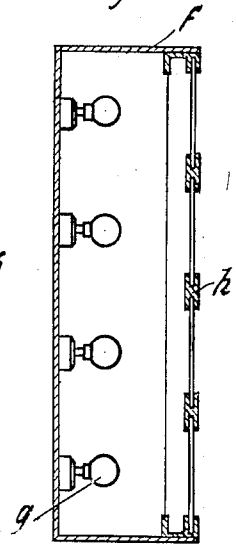
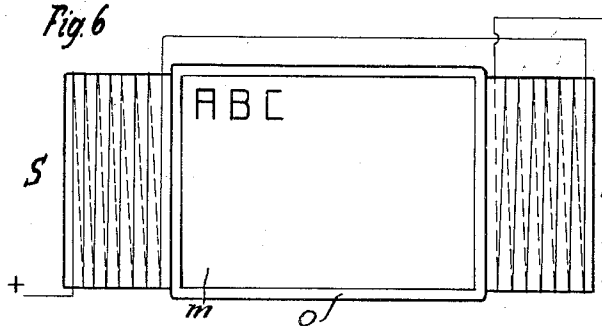


Fig. 6



Inventors

Johann Jacob Friedrich Stock & Paul Effing

By Dowell & Dowell

Attorneys

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UNITED STATES PATENT OFFICE

JOHANN JACOB FRIEDRICH STOCK, OF MUNICH, AND PAUL EFFING, OF BERLIN, GERMANY

METHOD OF PRODUCING CINEMATOGRAPHIC TITLES, HEADLINES, ANNOUNCEMENTS, AND THE LIKE

Application filed March 19, 1927, Serial No. 176,752, and in Germany March 20, 1926.

The production of film titles, headlines, casts, announcements and the like, for cinematographic displays has always been very troublesome and time-consuming as well as costly. According to the known methods, the titles are printed on a special printing press which must be attended by experienced printers or composers. Apart from the high costs of such proceedings, this method of producing film texts is accompanied by serious technical disadvantages because the printed matter lacks considerably in depth and plastic appearance and therefore is not well suited for photographic reproduction. The photographs which are subsequently obtained require much touching-up and the method in general affords little opportunity for artistic development.

All these disadvantages are successfully overcome by the method embodying this invention by which titles, casts, announcements, and the like, such as are required in cinematographic display, may be quickly composed and properly photographed without special skill on the part of the attendant. According to the method of this invention the photographs produced require practically no touching-up, while the cumbersome printing process with its elaborate machinery and auxiliaries is rendered obsolete.

The invention makes use of certain devices which are not new per se but are already known and used in shop window advertising, namely the so-called quick-change sign boards, which according to the claimed method are with or without ornamental frames or the like to obtain the aforesaid technical and economical advantages.

In order to avoid the aforesaid disadvantages incident to the methods of printing the film texts heretofore followed, it has been proposed to compose the words by single letters printed upon cards and to eventually reproduce the text so obtained photographically or by cinematograph directly. However, apart from the fact that these cards soon become smudged and therefore useless, great disadvantages result from shadows and gaps forming between the cards which cannot be avoided.

According to this invention, cut-out or stamped letters, signs and symbols are used, which are arranged and held upon a ground plate or sign board in any known or convenient manner, as for example by means of small tongues adapted to engage in slots of the board, or by magnetic forces, or otherwise. Magnetic forces, if employed, may be created by the employment of a number of electro-magnets arranged behind the ground plate, or by permanent magnetism of the ground plate or of the letters, which in such case must be made of steel. Photographing of the matter so composed may then be carried out under incident or reflected light or under transmitted light. The outline or appearance of the matter or film announcement so produced may be agreeably intensified with novel effect by spreading layers of sand, chalk, pearls, tinsel or the like in the spaces between the individual letters or signs. If a highly plastic appearance of the text is desired, a background of mouldable substance may be arranged in the spaces between the signs.

If the letters or signs are desired to be photographed under transmitted light, they are formed as transparent slides or panes and applied in substantially known manner to the front of a casing within which a number of lamps is provided. Transparent signs for the purpose of composing cinematographic texts have already been used, but hitherto they were arranged only in open frames and the lighting effects were insufficient. Neither these signs nor the aforementioned cards have ever been adopted in practice.

An additional advantage rests in the fact that film titles and other scriptive matter may be produced as new articles of manufacture; the said texts being produced separate from the films to which they refer and to which they are eventually applied by being pasted or otherwise attached in any known or convenient manner.

The accompanying drawings illustrate by way of example, several modifications of devices by means of which the new process may be carried out.

Fig. 1 illustrates a device for use under incident or reflected light.

Fig. 2 is a transverse section therethrough.

Fig. 3 shows in front and side elevation, a letter adapted for use with the device referred to.

Fig. 4 represents a modified form of the device for use with artificial or transmitted light.

Fig. 5 is a transverse section through the same.

Fig. 6 is a diagrammatic representation similar to Fig. 4 of a device in which the letters or signs are held to the ground plate by means of magnetic forces.

Referring to Figs. 1 and 2, the ground-plate or sign board *a* embodies a number of strips or slats *b* preferably covered with cloth or the like. The letters, signs or symbols *c* of which the text is to be composed are provided with tongues *d* by means of which they may be attached in substantially known manner to the sign board; the said tongues being inserted into the slots between the strips *b*. In this way any desired text may be composed.

Photographing a film text which has been composed by the said loose letter or sign arrangement, is preferably carried out from above, whereby the board *a* may be placed upon a table below the camera. The composed matter may be lighted directly from above or by reflection at any suitable angle according to the effect which it is desired to produce. In order to prevent the slots between the bars *b* being visible in the photograph, a layer of powder or granulated material may be applied in the spaces between the lettering, such as colored or uncolored sand, chalk, ground glass, tinsel, plastic mass, or the like, and if special ornamentations or effects are desired, these layers may be formed or moulded with representations of designs as for example trade marks, ornaments, and the like. To be able properly to align the letters and signs it is advisable to provide scale markings *e* along the frame of the sign board, or to align the letters by means of a screen of strings or wires temporarily placed over the sign board.

From the matter so composed, a photographic or cinematographic negative is produced in known manner, as said above, and from this negative the usual cinematographic exposures or copies are taken in the required number of film pictures. If desired, the plate which is to be used for the production of the negative may be faintly exposed with some pictorial representation, for example an enlarged film picture illustrative of the text words, in which way the interruption of the picture sequence in the film action as caused by the appearance of the text will become less disturbing.

Figs. 4 and 5 illustrate an arrangement with sheet metal case *f* within which are contained a number of electric lamps *g* and which, at its front, is provided with H-shaped guides *h*, into which transparent panes *i* carrying the requisite signs, letters, or words, are slid from the side of the box. The spaces between words and sentences are formed by blank panes *k*, while the joints between adjacent panes are covered-up by means of distance pieces or cover strips *l*. Exposure for the purpose of producing the photographic negative may be taken from above or, in view of the transmitted light, in any other way.

The modification illustrated in Fig. 6 also contains a ground plate *m* which, in this case, is assumed to be made of metal and arranged over a box *o* containing a number of electro-magnets *n*. The letters and signs may be substantially of the form shown in Fig. 3; and are likewise made of metal or, at least, must have an iron base. Their disposition upon the ground plate can be facilitated by turning off the current to the electro-magnets. The said arrangement may, of course, be reversed inasmuch as instead of providing a magnetic ground plate, an ordinary soft iron plate may be used and the letters and signs made to act as permanent steel magnets. Similar arrangements have been used as sign boards for advertising purposes, whereas for the production of film titles, headlines, casts, cinematograph announcements and the like, these devices have not heretofore been used in spite of the very important technical and economical advantages obtainable.

Instead of using a metallic ground plate, one made of insulating material (glass, vulcanite, enamel, and others) may be used and non-magnetic iron letters and signs held to the same by means of electro-magnets arranged behind the ground plate in the manner represented in Fig. 6.

The described new method of cinematographic letter composition is of course not restricted to the various forms of known devices shown in the drawing, as other known or novel devices may be used which would allow composing the text of loose letters or signs in the manner set forth, and so to obtain the desired cinematographic representations without the use of a printing press or other complicated device of the kind.

What we claim is:—

1. The method of producing cinematograph titles, headlines, announcements and the like, which consists in arranging a plurality of loose and individually formed letters upon a ground-plate so as to compose the desired text, temporarily fixing the letters in position on the plate, faintly photographing a pictorial representation on a photographic plate or cinematographic film, subsequently exposing the plate or film to photograph the

matter so composed on the ground-plate, and cinematographically making the required number of film pictures from the doubly exposed plate or film.

2. The method of producing cinematograph titles, headlines, announcements and the like, which consists in arranging a plurality of loose and individually formed letters of magnetically responsive material upon a ground-plate so as to compose the desired text, holding the letters to the plate by magnetic forces, applying to the plate between and around the letters thereon a layer of material providing a back ground, photographing the matter so composed with back ground, and cinematographically producing a number of film pictures from the photographic or cinematographic negative of the matter.

In testimony whereof we affix our signatures.

JOHANN JACOB FRIEDRICH STOCK.
PAUL EFFING.